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D350-748-243TRN
Job Sheet 200632



Part No: D350-748-243TRN

Job Qty: 1 pcs

Part Name: Crosstube Installation, High Aft



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 9/13/19

Job Tracking No:

Due Date: 10/14/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV A IPP Rev:A New Issue LL 12.05.08

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard	Workcenter/Supplier		DAS	Sign-off
					Setup Run Hrs Hrs	Workcenter / Supplier	Lead Time		
100	Mori Seiki TL-40 - 1	1 pcs		10/14/19	1.00 3.57	Mori Seiki TL-40 - 1		66	2019/10/04
110	QC 2	1 pcs		10/14/19	0.00 0.00	QC 2 - 1		9-89	
						QC 2 - 12			
						QC 2 - 14			
						QC 2 - 17			
						QC 2 - 19			
						QC 2 - 2			
						QC 2 - 20			
						QC 2 - 22			
						QC 2 - 23			
						QC 2 - 25			
						QC 2 - 32			
						QC 2 - 33			
						QC 2 - 35			
						QC 2 - 39			
						QC 2 - 4			
						QC 2 - 40			
						QC 2 - 44			
						QC 2 - 45			
						QC 2 - 48			
						QC 2 - 49			
						QC 2 - 50			
						QC 2 - 51			
						QC 2 - 52			
						QC 2 - 57			
						QC 2 - 62			
						QC 2 - 63			
						QC 2 - 8		DAS	
						QC 2 - 66		66	2019/10/04
						QC 2 - 64		9-89	

Plex 9/13/19 11:00 AM Dart.lajeunesse.marie

					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
120	Mori Seiki TL-40 - 1 - B4B	1 pcs	10/14/19	1.00 3.57	Mori Seiki TL-40 - 1 - B4B	DAS 66 2019/10/08 9-89
130	QC 2	1 pcs	10/14/19	0.00 0.00	QC 2 - 1	
					QC 2 - 12	
					QC 2 - 14	
					QC 2 - 17	
					QC 2 - 19	
					QC 2 - 2	
					QC 2 - 20	
					QC 2 - 22	
					QC 2 - 23	
					QC 2 - 25	
					QC 2 - 32	
					QC 2 - 33	
					QC 2 - 35	
					QC 2 - 39	
					QC 2 - 4	
					QC 2 - 40	
					QC 2 - 44	
					QC 2 - 45	
					QC 2 - 48	
					QC 2 - 49	
					QC 2 - 50	
					QC 2 - 51	
					QC 2 - 52	
					QC 2 - 57	
					QC 2 - 62	
					QC 2 - 63	
					QC 2 - 8	
					QC 2 - 66	DAS MD 66 2019/10/08 9-89
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
140	QC 8	1 pcs	10/14/19	0.00 0.00	QC 8 - 12	
					QC 8 - 14	
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	

				QC 8 - 67	
				QC 8 - 1 (A)	DAS
				QC 8 - 47	47 19-10-17
				QC 8 - 40	9-89
				QC 8 - 52	
				QC 8 - 23	
				QC 8 - 57	
				QC 8 - 76	
150 Crosstubes - 2 - B4B	1	10/14/19	0.00 0.81	Crosstubes - 1 - B4B	
pcs				Crosstubes - 2 - B4B	
				Crosstubes - 3 - B4B	
				Crosstubes - 4 - B4B	19-10-18
190 Packaging 3-1 - Stock - B4B	1	10/14/19	0.00 0.00	Packaging 3 - 1 - B4B	
pcs				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	19-10-18
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
200 QC 21 - SA	1	10/14/19	0.00 0.00	QC 21 - SA - 21	DAS
pcs				QC 21 - SA - 70	21
				QC 21 - SA - 53	9-89 OCT 18 2019

Part Op 100 - TL-40 (Mori Seiki CNC Lathe Large) 1-Cut tube on chop saw, leave extra mat'l for facing and install plugs 350-241
 Descriptions: on both ends. 2-Face both sides of tube. 3- Turn program 02000 section on both side as per folio FB468. 4- Turn program 03000 section on both side as per folio FB468. 5- Blend transition lines only with belt sander 60 grit. Folio

rev: A Dwg rev: A

110 - (QC2- Inspect parts off machine FAI/FAIB)

120 - TL-40 (Mori Seiki CNC Lathe Large) 1- Turn program 04000 section on both side as per folio FB468. 2- Turn program 05000 section on both side as per folio FB468. 3- Blend transition lines only with belt sander 60 grit. 4-Scribe part # as per Dwg D350-748-243. Folio rev: A Dwg rev: A

130 - (QC2- Inspect parts off machine FAI/FAIB) PERFORME ULTRASONIC MEASUREMENT

140 - (QC8- Inspect parts - second check)

150 - Crosstubes-2 (Crosstubes) 1-Grind machining marks

190 - Identify and stock in kanban rack

200 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6021-125	Crosstube Material - 17-4Ph SS	1 pcs (1 ea)	100-Mori Seiki TL-40 - 1	F151691

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Mori Seiki TL-40 - 1	D6021-125	1	31	0

Part Specifications

Specifications could not be found.

**Container No: S219712****Part: D350-748-243TRN****Job No: 200632****Serial No/Batch: S219712****Revision: A****Inspector:****Exp Date:****Instructions:**

Dart Aerospace Ltd.
 1270 Aberdeen Street
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Date: 10/04/19

Plex 9/13/19 11:00 AM Dart.lajeunesse.marie

②

DART AEROSPACE LTD	Work Order:	200632
Description: Crosstube Assembly (AS350/355 High Aft SS)	Part Number:	D350-748-243
Inspection Dwg: D350-748-243 Rev: A		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

	Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.240	+/-0.005	2.245	✓		CNC-04 ↓	
	2.180	+0.005/-0.000	2.185	✓			
	2.180	+0.005/-0.000	2.184	✓			
	2.208	+0.005/-0.000	2.213	✓			
	2.234	+0.005/-0.000	2.239	✓			
	2.253	+0.005/-0.000	2.258	✓			
	2.272	+0.005/-0.000	2.277	✓			
	2.299	+0.005/-0.000	2.303	✓			
	0.063	+/-0.010	.063	✓		CNC-08	
	5.25	+/-0.060	5.243	✓		CNC-08	
	R0.063	+/-0.010	.063	✓		RG	
	R0.50	+/-0.030	.500	✓		"	
SIDE B	2.240	+/-0.005	2.245	✓		CNC-04 ↓	
	2.180	+0.005/-0.000	2.185	✓			
	2.180	+0.005/-0.000	2.183	✓			
	2.208	+0.005/-0.000	2.213	✓			
	2.234	+0.005/-0.000	2.239	✓			
	2.253	+0.005/-0.000	2.258	✓			
	2.272	+0.005/-0.000	2.277	✓			
	2.299	+0.005/-0.000	2.304	✓			
	0.063	+/-0.010	.063	✓		CNC-08	
	5.25	+/-0.060	5.249	✓		"	
	R0.063	+/-0.010	.063	✓		RG	
	R0.50	+/-0.030	.500	✓		"	
	124.70	+/-0.060	124.725	✓		Tape	

Item	Qty	Part Number	Description
1	X	D350-748-243	CROSSTUBE ASSEMBLY (AS 350/246 HI AFT)
2	1	D6021-125	CROSSTUBE
3	2	D3502-1	SUPPORT
4	2	D5123-7	CLAMP CUSHION
5	1	AETC-1032	INSERT
6	2	MS21920-20	CLAMP
		OR MS21920-21/22	(PER DART SPEC. M-MS21920-20/21/22)
7	1	NAS1149C0363R	WASHER (OR AN880C10)
8	1	NAS1635-3-8	SCREW (OR MS51958-63)
9	AR	PROSEAL 890 B-2	SEALANT, AMS-S-8902 CLASS B-2

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6021-125
FINISHED LENGTH AFTER TURNING = 124.70±0.06 (AFTER BENDING/TRIMMING = 122.70 REF)
- 2) FINISH: PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCE: PER DART QSI 010 UNLESS OTHERWISE NOTED.
WALL THICKNESS ECCENTRICITY PER DART QSI 038 7.2
MIN. ALLOWABLE WALL IS -0.020 FROM NOMINAL
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: DART PART NUMBER "D350-748-243" AND BATCH NUMBER ON INSIDE OF CUFF
- 7) WEIGHT: 29.85 lb
- 8) PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR Ø0.280 HOLE.
- 9) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLEND OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.
- 10) BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- 11) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES PER SIDE. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D. ON TOP HALF OF BEND, AND 8% ON BOTTOM HALF OF BEND.
- 12) MAX AMPLITUDE OF RIPPING ALONG BENT PORTION OF THE TUBE IS 0.030 (ZN A1-3)
- 13) MAX TWIST: WITH XTUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.38 (ZN C1-3).

ASSEMBLY

- 14) TO INSTALL D3502-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.02" TO 0.05" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8902 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 15) TORQUE CLAMPS 80 TO 80 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

SHOP COPY

UNCONTROLLED
STRUCTURE TO

200632 MJS
1409-13

DEO ATTACHED

RELEASED

2015 MAR 18

RELEASED

UNDER REVIEW

2015 MAR 18

12/14/15
LRF 15541
16/12/15

A	NEW ISSUE	DESCRIPTION	CP	BY	DATE
REV.					
DRAWN					
CHECKED					
MFG. APPR.					
APPROVED					
DE APPR.					
DATE	15.01.21				

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO.	D350-748-243
REV. A	SHEET 1 OF 4
TITLE	CROSSTUBE (AS 350/246 HI AFT)
SCALE	NTS
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DRAWING NO. D350-748-243	TITLE CROSSTUBE	REV. A	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D350-748-243-A-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN 15.11.18	CHECKED AS	DATE 15.11.18	MFG. APPR. [Signature]	APPROVED [Signature]	DATE FEB 19 2016	DE APPR. [Signature]	
DATE 15.11.18	DATE 15.11.18	DATE 15.11.18	DATE 15.11.18	DATE 15.11.18	DATE 15.11.18	DATE 15.11.18	

AMEND NOTE 2 (SHEET 1) AS FOLLOWS:

- 2) FINISH: PREPARE SURFACE PER DART QSI 005 4.1.4
 PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
 PAINT OUTSIDE PER DART QSI 005 4.2
 OR
 POWDER COAT WHITE (4.3.5.2) PER DART QSI 005 4.3

RELEASED
 2016-02-26
 ELN 16-534

NCR No.

Route update only



Job: _____ Part No. _____		DISPOSITION Rework Scrap Use-as-is		DEPARTMENT/PROCESS Skid-tube Machining Large Fab Cross tube Small Fab Finishing Eng. (Non-AW) Prod. Eng. Coord. Rec/Store/Packaging Engineering Water Jet Supplier Quality			
Date :	Sequence #:	QTY Affected :		MIRB (QSI042)			
Description Work Order Deviation		Disposition					
				Completed By			
				Lead hand / Supervisor			
				QC / QA Coordinator			

Root Cause Operator Manufacturing Process Equip/Tooling Handling/Preservation Material Product Improvement Process Improvement Human Factors		FAULT CATEGORY Pressure/Forced Bending Crushing Cracks Crimp/Kink/Ripple/Wave/Twist Marks/Chatter Mislabeled Other/Details: Contamination Misaligned/off center BOM/Route Broken/Damage/Defect Incomplete/Unclear Instructions Drill Holes Fit/Function Power Loss/Surge Folio/Program Grain Direction Weld Wrong Stock Pulled Out of Sequence Off-set/Set-up Positioned Wrong Outside Tolerance Drawing Finish Part Lost/Missing Misread											
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